

### **REMARKS**

Claims 1-17 are pending in this application. By this Amendment, claims 1-3, 5-7, and 9-12 are amended and new claims 13-17 are added. No new matter is added.

The Office Action objects to the claims for containing asserted informalities. The Office Action also rejects claims 1-12 under 35 U.S.C. 112, second paragraph. Applicants believe that the objection to the claims and the rejection under 35 U.S.C. 112, second paragraph, are both overcome with the above amendments to the claims. Reconsideration and withdrawal of the objection to the claims and the rejection under 35 U.S.C. 112, second paragraph, are thus respectfully requested.

The Office Action rejects claim under 35 U.S.C. 102(b) as being anticipated Abusleme et al. (U.S. Patent No. 6,107,393) or Zolotnitsky et al. (U.S. Published Application No. 2001/0003124). This rejection is traversed.

Before commenting on the cited prior art, Applicants would like to point out that the gist of the present invention resides in fluoropolymer compositions consisting of

- copolymers of Ethylene (E) and Chlorotrifluoroethylene (CTFE)  
having an E content ranging from 0.5-20% by moles,
- wherein the total amount of E of the polymeric composition is 0.5 to 10%, the CTFE being the remaining part to 100%.

The claimed compositions show:

- the same good electrical properties of PCTFE while avoiding the brittle behavior of PCTFE (see page 2 of the description; see example 4 in comparison with comparative example 5) thus resulting in very useful compositions for forming electrical cable coatings; and

-the same mechanical properties of E/CTFE (50/50) while having improved electrical properties with respect to E/CTFE (50/50). See example 17.

Furthermore the presently claimed compositions, when in admixture with a nucleating agent, such as PTFE, are foamable without requiring any foaming agents. See page 8, lines 8-11, of the present specification.

Abusleme et al. discloses terpolymers of E, CTFE and a hydrogenated monomer (c) and the composition thereof, including hydrogenated plasticizers, to be used for flexible cable applications.

Clearly, the E/CTFE terpolymer of Abusleme et al. containing the hydrogenated monomers c) does not anticipate the present copolymers of E and CTFE monomers not containing any termonomer.

Indeed, since the amount of E is the complement of the amount of CTFE to 100%, as stated in claim 1, the only monomers present in the polymeric compositions, and thus in the copolymers, of the presently claimed invention are E and CTFE.

Actually, the present copolymers consisting only of E and CTFE are completely different from the E/CTFE polymers of Abusleme et al. that always contain a third hydrogenated monomer c).

Furthermore, Abusleme et al. by no means suggests the presently claimed copolymers. In particular, in Abusleme one of ordinary skill in the art would not have found any motivation to remove the hydrogenated termonomer to obtain copolymers of E and CTFE and to select among the possible E/CTFE copolymers those having a content of E up to 20%.

In fact, Abusleme et al. is involved with the technical problem of finding fluoropolymers having improved affinity with hydrogenated plasticizer (col. 1, lines 1-5) for avoiding whitening effects in cables (col. 1, lines 57-61) which is a problem completely different from that addressed by the present invention, that is one of finding a polymer having the good electrical properties of PCTFE in combination with the good mechanical properties of ECTFE.

Zolotnitsky et al. discloses a composition containing the same terpolymer E/CTFE/hydrogenated monomer of Abusleme et al., a hydrogenated plasticizer and inorganic fire retardant. Thus, the above arguments regarding Absuleme et al. also apply to Zolitnisky et al.

For at least the above reasons, reconsideration and withdrawal of the rejections of claim 1 under 35 U.S.C. 102(b) are respectfully requested.

The Office Action also rejects claims 2-3 under 35 U.S.C. 103(a) as being obvious apparently over Abusleme et al. and Zolotnitsky et al. The Office Action also rejects claims 5-11 under 35 U.S.C. 103(a) as being obvious apparently over Abusleme et al. or Zolotnitsky et al. in combination with "Encyclopedia" and Perlman (U.S. Patent No. 4,304,713) or Buckmaster et al. (U.S. Patent No. 5,688,457). These rejections are traversed.

The combination of Abusleme et al. and Zolotnitsky et al. by no means teaches or suggests solving the present technical problem of obtaining a polymer having the same good electrical properties of PCTFE and the same thermoprocessable properties of ECTFE by using the composition of particular E/CTFE polymers as presently claimed in claim 1.

Since claims 2 and 3 are dependent from claim 1 which is novel and would not have been obvious over said references for the reasons stated above, claims 2 and 3 are novel and would not have been obvious as well.

Applicants note that the presently claimed invention provides unexpected results and advantages. In particular, what is unexpected is that a composition formed by E/CTFE copolymers containing E within 0.5-200% by moles and containing 2.6% of E in the total, shows a higher second melting temperature (195°C) with respect to that (179, 8°C) of a E/CTFE copolymer containing 5.1% of E. See example 9 in comparison with comparative example 10.

A higher second melting temperature is an important factor when preparing manufactured articles by thermoprocessing since it results in a higher thermal stability.

The above unexpected results attain to the particular compositions of particular E/CTFE polymers.

Applicants also note that the exemplified second melting temperature and MI of Abusleme et al. and Zolotnisky et al., even included in the present ranges, are referred to E/CTFE terpolymers completely different from the present E/CTFE copolymer compositions as explained above.

Furthermore, particularly regarding claim 4, the combination of the cited references by no means teaches or suggests obtaining a composition that is foamable without any foaming agents by using a composition as claimed in claim 4. The same is true regarding claims 5-11, Perelman et al. and Buckmaster do not add anything to the teachings of the

cited references that would point one of ordinary skill in the art to the present foamable compositions.

In particular, Perelman discloses a foamable composition of a meltable perfluorocarbon (FEP) not encompassing ECTFE polymers and PTFE nucleating agent also containing a blowing agent which instead is not required by the present foamable composition.

Buckmaster discloses an extrusion process of thermoprocessible polymer incorporating a nucleating agent for improve the extrusion rate which produce unfoamed extruded since no blowing agent is employed.

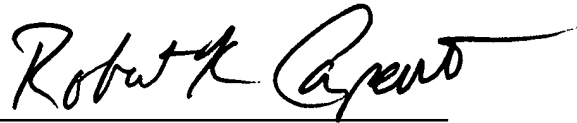
Accordingly the composition of Buckmaster that is unfoamable without a blowing agent does not suggest the present compositions of claims 4-11 that are foamable by extrusion without blowing agents.

Therefore, for at least the above reasons, the presently claimed invention would not have been obvious over the applied combination of references. Reconsideration and withdrawal of the rejections of claims 2-3 and 5-11 under 35 U.S.C. 103(a) are thus respectfully requested.

Applicants respectfully submit that this application is in condition for allowance and such action is earnestly solicited. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. The Commissioner is authorized to charge payment for any additional fees which may be required with respect to this paper to Counsel's Deposit Account 01-2300, referring to client-matter number 108910-00128. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300, referring to client-matter number 108910-00128.

Respectfully submitted,

A handwritten signature in black ink, reading "Robert K. Carpenter". The signature is fluid and cursive, with a horizontal line drawn underneath it.

Robert K. Carpenter  
Registration No. 34,794

Customer No. 004372  
ARENT FOX PLLC  
1050 Connecticut Avenue, N.W.,  
Suite 400  
Washington, D.C. 20036-5339  
Tel: (202) 857-6000  
Fax: (202) 638-4810

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